

ABSTRACT OF THE DISCLOSURE

A system for providing attitude control with respect to a spacecraft is provided. The system includes a reaction wheel control module configured to control a number of reaction wheel assemblies associated with the spacecraft in order to control attitude, and a maneuver control module configured to use a number of gimbaled Hall Current thrusters (HCTs) to control the total momentum associated with the spacecraft during an orbit transfer. The total momentum includes the momentum associated with the reaction wheel assemblies and the angular momentum of the spacecraft. Using the gimbaled HCTs to control the momentum associated with the reaction wheel assemblies during the orbit transfer results in minimal HCT gimbal stepping.